

PATENT
Attorney Docket No. CW-06719

APPENDIX 1
CLEAN VERSION OF REWRITTEN, ADDED, AND/OR CANCELLED
TEXT PURSUANT TO 37 C.F.R. §1.121 (b)

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A candle made from TG alone will have a bright flame and burn relatively rapidly. A candle made from FFA alone will have a low flame and burn more slowly. By mixing these two products together, a candle can be achieved that has an appealing, steady flame and that burns relatively slowly.

31 In one embodiment, the mix of FFA to TG for a preferred candle burn is at least 2% to 35% by weight FFA, and most preferably is approximately 4% to 22% by weight FFA. Most preferably, such FFA is plant source FFA. In another embodiment, the mix of FFA to TG for a preferred candle burn is at least 40% by weight TG, and most preferably at least 70% by weight TG. Again, most preferably, such TGs are plant source TGs.

Palm Stearine or related TG

Palm stearine (a hydrogenated TG) is preferred because palm stearine is currently a low-cost by-product of palm oil processing and therefore readily available and inexpensive. Furthermore, palm stearine and related plant source TGs are derived from a renewable, non-animal source. These qualities are highly sought after as our society moves towards sustainable resource practices. Also, plant source TGs and FFAs tend to have lower odors.

Candle 10 is preferably made as follows. Palm stearine is available commercially and is usually shipped as flakes. This flaked material can be provided having the lower and more desired IVs of the present invention. In one embodiment, a preferred IV of the TG component is less than 1.0 and more preferably approximately 0.5 or less. The FFA vegetable stearic acid is similarly commercially available, shipped as flakes and is provided having the lower and more desired IVs of the present invention. In one embodiment, a preferred IV for the FFA component is less than 1.0, and more preferably approximately 0.5 or less. These components are preferably melted at temperatures of approximately 180 degrees F and then mixed and poured into a mold about wick 12. The molten wax cools to form the candle body 11. Wick 12 is preferably a paper core cotton wick.

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CLAIMS

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22. A candle composition substantially comprising hydrogenated plant source triglycerides in combination with a free fatty acid, said candle composition having an iodine value of less than 10 and substantially free of any petroleum waxes, whereby when said candle composition is burned substantially no soot is produced.
23. The candle composition of claim 22, wherein said iodine value is less than 7.5.
24. The candle composition of claim 22, wherein said iodine value is less than 5.
25. The candle composition of claim 22, wherein said iodine value is less than 3.
26. The candle composition of claim 22, wherein said iodine value is less than 1.
27. The candle composition of claim 22, wherein said free fatty acid includes a plant source free fatty acid.
28. The candle composition of claim 22, wherein said plant source triglycerides and said free fatty acid each have an iodine value of 5 or less.
29. The candle composition of claim 22, wherein said plant source triglycerides and said free fatty acid each have an iodine value of 1 or less.
30. The candle composition of claim 22 including from 2% to 35% by weight free fatty acid.
31. The candle composition of claim 22 including approximately 4% to 22% by weight free fatty acid.

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32. A paraffin-free candle consisting essentially of triglycerides, free fatty acids, and a wick, said candle having an iodine value of less than 10 whereby when said candle is burned substantially no soot is produced.

33. The candle of claim 32, wherein said candle includes at least 40% by weight triglyceride.

34. The candle of claim 32, wherein said candle includes at least 70% by weight triglyceride.

35. The candle of claim 32, wherein said candle includes at least 4% by weight plant source free fatty acid.

36. The candle of claim 32, having an iodine value of less than 5.

37. The candle of claim 32, having an iodine value of less than 1.

38. The candle of claim 32 wherein said triglyceride and said free fatty acid are selected from plant-source triglycerides and free fatty acids.

39. A paraffin-free candle comprised substantially of hydrogenated triglycerides, hydrogenated free fatty acids, and a wick, said candle having an iodine value of less than 10 whereby when said candle is burned substantially no soot is produced.

40. The candle of claim 39 having an iodine value of less than 5.

41. The candle of claim 39, having an iodine value of less than 1.